

Application No. 10/044,896  
Amendment dated October 24, 2005  
Reply to Office Action of September 7, 2005

This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:**

1. (Previously presented) An anti-IFN- $\alpha$  monoclonal antibody which binds to and neutralizes a biological activity of at least IFN- $\alpha$  subtypes IFN- $\alpha$ 1, IFN- $\alpha$ 2, IFN- $\alpha$ 4, IFN- $\alpha$ 5, IFN- $\alpha$ 8, IFN- $\alpha$ 10, and IFN- $\alpha$ 21.
2. (Original) The antibody of claim 1 which is a murine antibody.
3. (Original) The antibody of claim 1 which is a humanized antibody.
4. (Original) The antibody of claim 1 which is a human antibody.
5. (Original) The antibody of claim 1 wherein said biological activity is antiviral activity.
6. (Original) The antibody of claim 5 wherein said antibody is capable of neutralizing at least 70% of the antiviral activity of said IFN- $\alpha$  subtypes.
7. (Original) The antibody of claim 5 wherein said antibody is capable of neutralizing at least 80% of the antiviral activity of said IFN- $\alpha$  subtypes.
8. (Original) The antibody of claim 5 wherein said antibody is capable of neutralizing at least 90% of the antiviral activity of said IFN- $\alpha$  subtypes.
9. (Original) The antibody of claim 5 wherein said antibody is capable of neutralizing at least 99% of the antiviral activity of said IFN- $\alpha$  subtypes.

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10. (Cancelled)

11. (Previously presented) The antibody of claim 1 which is murine anti-human IFN- $\alpha$  monoclonal antibody 9F3 comprising an amino acid sequence of the monoclonal antibody produced by a hybridoma having ATCC Accession No. PTA-2917, or progeny thereof or a humanized or chimeric form thereof.

12. (Previously presented) The antibody of claim 11 which is humanized anti-human IFN- $\alpha$  monoclonal antibody comprising a light chain variable domain of SEQ ID NO:3 and a heavy chain variable domain of SEQ ID NO:5.

13. (Original) The antibody of claim 1 which binds essentially the same IFN- $\alpha$  epitope as the anti- IFN- $\alpha$  antibody produced by the hybridoma cell line deposited with ATCC on January 18, 2001 and having accession No. PTA-2917.

14. (Original) The antibody of claim 1 which is of the IgG class.

15. (Original) The antibody of claim 14 which has an IgG<sub>1</sub>, IgG<sub>2</sub>, IgG<sub>3</sub>, or IgG<sub>4</sub> isotype.

16. (Original) The antibody of claim 1 which is an antibody fragment.

17. (Original) The antibody of claim 16 which is a Fab fragment.

18. (Original) The antibody of claim 16 which is a F(ab')<sub>2</sub> fragment.

19. (Original) The antibody of claim 16 which is a Fab' fragment.

20. (previously presented) An antibody, or antigen binding fragment thereof,

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comprising a heavy chain variable domain and a light chain variable domain, wherein the light chain variable domain comprises the following CDR's:

- (a) L1 of the formula RASQSVSTSSYSYMH (SEQ ID NO: 7);
- (b) L2 of the formula YASNLES (SEQ ID NO: 8); and
- (c) L3 of the formula QHSWGIPRTF (SEQ ID NO: 9);

and wherein the antibody or antigen binding fragment specifically binds to at least IFN- $\alpha$  subtypes IFN- $\alpha$ 1, IFN- $\alpha$ 2, IFN- $\alpha$ 4, IFN- $\alpha$ 5, IFN- $\alpha$ 8, IFN- $\alpha$ 10, and IFN- $\alpha$ 21.

21. (Currently amended) The antigen binding fragment of claim 20 which is comprises a Fab.

22. (Currently amended) An antibody, or antigen binding fragment thereof, comprising a light chain variable domain and a heavy chain variable domain, wherein the heavy chain variable domain comprises the following CDR's:

- (a) H1 of the formula GYTFTEYJIIH (SEQ ID NO: 10);
- (b) H2 of the formula SINPDYDITNYNQRFKG (SEQ ID NO: 11); and
- (c) H3 of the formula WISDFFDY (SEQ ID NO: 12);

and wherein the antibody or antigen binding fragment specifically binds to at least IFN- $\alpha$  subtypes IFN- $\alpha$ 1, IFN- $\alpha$ 2, IFN- $\alpha$ 4, IFN- $\alpha$ 5, IFN- $\alpha$ 8, IFN- $\alpha$ 10, and IFN- $\alpha$ 21.

23. (Currently amended) The antigen binding fragment of claim 22 which is comprises a Fab.

24. (Previously presented) An anti-IFN- $\alpha$  antibody comprising  
(A) at least one light chain or an antigen binding fragment thereof, comprising the following CDR's:

- (a) L1 of the formula RASQSVSTSSYSYMH (SEQ ID NO: 7);
- (b) L2 of the formula YASNLES (SEQ ID NO: 8); and
- (c) L3 of the formula QHSWGIPRTF (SEQ ID NO: 9); and

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(B) at least one heavy chain or an antigen binding fragment thereof, comprising the following CDR's:

- (a) H1 of the formula GYTFTEYIIH (SEQ D NO: 10);
- (b) H2 of the formula SINPDYDITNYNQRFKG (SEQ ID NO: 11); and
- (c) H3 of the formula WISDFFDY (SEQ ID NO: 12).

25. (Original) The antibody of claim 24 having a homo-tetrameric structure composed of two disulfide-bonded antibody heavy chain-light chain pairs.

26. (Original) The antibody of claim 24 which is a linear antibody.

27. (Original) The antibody of claim 24 which is a murine antibody.

28. (Original) The antibody of claim 24 which is a chimeric antibody.

29. (Original) The antibody of claim 24 which is a humanized antibody.

30. (Original) The antibody of claim 24 which is a human antibody.

31-41. (Cancelled)

42. (Previously presented) A hybridoma cell line comprising a nucleic acid molecule encoding an antibody of claim 1.

43. (Original) A hybridoma cell line deposited with ATCC on January 18, 2001 and having accession No. PTA-2917.

44. (Original) An antibody produced by the hybridoma cell line of claim 42.

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45. (Original) A pharmaceutical composition comprising an effective amount of the antibody of claim 1 in admixture with a pharmaceutically acceptable carrier.

46. (Original) A pharmaceutical composition comprising an effective amount of the antibody of claim 11 in admixture with a pharmaceutically acceptable carrier.

47. (Original) A pharmaceutical composition comprising an effective amount of the antibody of claim 12 in admixture with a pharmaceutically acceptable carrier.

48. (Original) A pharmaceutical composition comprising an effective amount of the antibody of claim 24 in admixture with a pharmaceutically acceptable carrier.

49.-54. (Cancelled)

55. (Previously Presented) The anti-IFN- $\alpha$  antibody of claim 1 which does not neutralize IFN- $\beta$ .

56. (Previously Presented) The anti-IFN- $\alpha$  antibody of claim 1 which specifically binds to and neutralizes all IFN- $\alpha$  subtypes.

57. (Currently amended) A ~~cell-line~~ host cell comprising a nucleic acid molecule encoding an antibody of claim 1.

58. (Currently amended) A ~~cell-line~~ host cell comprising a nucleic acid molecule encoding an antibody of claim 24.

59. (Currently amended) A ~~cell-line~~ host cell comprising a nucleic acid molecule encoding an antibody of claim 12.

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60. (Previously presented) A pharmaceutical composition comprising an effective amount of the antibody of claim 20 in admixture with a pharmaceutically acceptable carrier.

61. (Previously Presented) A pharmaceutical composition comprising an effective amount of the antibody of claim 22 in admixture with a pharmaceutically acceptable carrier.

62. (Currently amended) A ~~cell line~~ host cell comprising a nucleic acid molecule encoding an antibody of claim 20.

63. (Currently amended) A ~~cell line~~ host cell comprising a nucleic acid molecule encoding an antibody of claim 22.